

HP StorageWorks

4000/6000/8000 Enterprise Virtual Array connectivity 5.0B for Windows release notes

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4000/6000/8000 Enterprise Virtual Array connectivity 5.0B for Windows release notes

About this document

This document includes the following topics:

- [Release notes information](#)
- [Intended audience](#)

Release notes information

These release notes cover the following topics:

- New features
- EVA storage system
- EVA compatibility
- Operating constraints
- Storage System Scripting Utility for EVA
- Avoiding problem situations
- Host considerations
- Windows 2000 dynamic disk snapshots and snapclones

Intended audience

This document is intended to assist customers who purchased the HP StorageWorks 4000/6000/8000 Enterprise Virtual Array (EVA) and the Windows® operating system.

This document is also intended for use by HP customer service personnel responsible for installing and maintaining devices connected to the EVA storage system.

Accessing future product updates

HP strongly recommends that customers sign up online using the Subscriber's choice web site:

<http://www.hp.com/go/e-updates>.

- Subscribing to this service provides you with e-mail updates on the latest product enhancements, newest versions of drivers, and firmware documentation updates as well as instant access to numerous other product resources.
- After signing up, you can quickly locate your products by selecting **Business support** and then **Storage** under Product Category.

New features

The following are major enhancements included in this release:

- Support is provided for EVA4000/6000/8000 controller software 5.02.
- Support is provided for multipathing I/O (MPIO).
- Support is provided for Native Active-Active Device Specific Module (AA DSM).
- The ability for different types of multipathing software to coexist on the same server.

EVA storage system

Multiple storage system types

The extended interoperability of the heterogeneous storage area network (SAN) allows you to mix several types of HP StorageWorks storage systems. The latest information about configuration rules are available in *HP StorageWorks SAN design reference guide*, which can be downloaded from the following web site:

<http://h18000.www1.hp.com/products/storageworks/san/documentation.html>

EVA documentation

For a complete library of EVA and related documentation, see the following web sites:

<http://www.hp.com/go/eva4000>

<http://www.hp.com/go/eva6000>

<http://www.hp.com/go/eva8000>

Product support information

This document contains the current product information at the release of controller software 5.02.

The latest product support release information and downloads for storage products are available at the following web site:

<http://h18006.www1.hp.com/storage/index.html>.

Supported configurations

Supported configurations are described in the *Enterprise Virtual Array QuickSpecs*, available at the following web site:

<http://h18006.www1.hp.com/storage/arraysystems.html>.

The extended interoperability of the heterogeneous SAN allows you to mix several types of HP StorageWorks storage systems. The *HP StorageWorks SAN design reference guide* is a detailed guide for SAN configurations and is available at the following web site:

<http://h18004.www1.hp.com/products/storageworks/san/documentation.html>.

EVA compatibility

Operating system support

 **NOTE:**

Table 1 contains current minimum-level operating system specifications at the time of this release. Some component versions may change due to revision. For the latest information, see the following web site:
<http://h18006.www1.hp.com/storage/index.html>.

Table 1 lists the operating system specifications when using MSCS clustering.

Table 1 Operating system specifications

Platform	OS version	FCA (HBA)	Adapter firmware/Boot BIOS version (minimum)	Adapter driver version (minimum)
Windows 2000	5.0 SP 3, SP 4	KGPSA-CB 176479-B21	3.92a2/ 1.70a1	5-5.10a11
		FCA2101 245299-B21	3.92a2/ 1.70a1	5-5.10a11
		FCA2355 308540-B21	3.92a2/ 1.70a1	5-5.10a11
		FCA2404 305573-B21	1.90a4/ 1.70a1	5-5.10a11
		FCA2404DC 323264-B21	1.90a4/ 1.70a1	5-5.10a11
		FCA2408 343073-B21	1.90a4/ 1.70a1	5-5.10a11
		FC Mezzanine Card for BL20P	1.34	9.0.2.11
		FCA2214 281541-B21	1.34	9.0.2.11
		FCA2214DC 321835-B21	1.34	9.0.2.11
		A7387A	1.90a4/ 1.70a1	5-5.10a11
		A7388A	1.90a4/ 1.70a1	5-5.10a11

Platform	OS version	FCA (HBA)	Adapter firmware/ Boot BIOS version (minimum)	Adapter driver version (minimum)
Windows Server 2003 SP1	5.2	KGPSA-CB 176479-B21	3.92a2/ 1.70a1	5-5.10a11
			3.92a2/ 1.70a1	Storport 5-1.02a7
		FCA2101 245299-B21	3.92a2/ 1.70a1	5-5.10a11
			3.92a2/ 1.70a1	Storport 5-1.02a7
		FCA2355 308540-B21	3.92a2/ 1.70a1	5-5.10a11
			3.92a2/ 1.70a1	Storport 5-1.02a7
		FCA2404 305573-B21	1.90a4/ 1.70a1	5-5.10a11
			1.90a4/ 1.70a1	Storport 5-1.02a7
		FCA2404DC 323264-B21	1.90a4/ 1.70a1	5-5.10a11
			1.90a4/ 1.70a1	Storport 5-1.02a7
		FCA2408 343073-B21	1.90a4/ 1.70a1	5-5.10a11
			1.90a4/ 1.70a1	Storport 5-1.02a7
		FC Mezzanine Card for BL20P	1.34	9.0.2.11
		FCA2214 281541-B21	1.34	9.0.2.11
		FCA2214DC 321835-B21	1.34	9.0.2.11
		A7387A	1.90a4/ 1.70a1	5-5.10a11
			1.90a4/ 1.70a1	Storport 5-1.02a7
		A7388A	1.90a4/ 1.70a1	5-5.10a11
			1.90a4/ 1.70a1	Storport 5-1.02a7

Platform	OS version	FCA (HBA)	Adapter firmware/Boot BIOS version (minimum)	Adapter driver version (minimum)
Windows Server 2003 for Itanium®-based system SP1	5.2	A7298A	1.90a4/ 3.10a6	6-5.10a11
			1.90a4/ 3.10a6	Storport 6-1.10a4
	AB232A		1.90a4/ 3.10a6	6-5.10a11
			1.90a4/ 3.10a6	Storport 6-1.10a4
	AB466A		1.90a4/ 3.10a6	Storport 6-1.10a4
			EFI 1.90a4/3.10a6	6-5.10a11
	AB467A		1.90a4/ 3.10a6	Storport 6-1.10a4
			EFI 1.90a4/3.10a6	6-5.10a11

Switch support

This version supports the Fibre Channel (FC) switches and firmware versions listed in the *HP StorageWorks SAN design reference guide*, available at the following web site:

<http://h18000.www1.hp.com/products/storageworks/san/documentation.html>.



NOTE:

HP recommends that you do not mix switch firmware versions in your SAN. It is considered a best practice to uniformly upgrade all switches in the SAN.

Multiple-path support

Windows with EVA storage requires the installation of StorageWorks Multipathing software on each host to achieve high-availability, multiple-path capability.

Server support

Windows supports Intel-based, ProLiant X86, and ProLiant Blade Servers and HP Integrity Servers.

Operating constraints

You can find information about operating constraints specific to the EVA and Command View EVA in their respective release notes.

SAN boot procedures

Booting from the SAN is supported for Windows 2000, and Windows 2003 for multipath configurations. SAN boot procedures are available on the following StorageWorks web site:

<http://h18000.www1.hp.com/products/storageworks/san/documentation.html>.

Failover/failback

Failback preference settings for the HSV controllers are specific to the operating system. Refer to the HP StorageWorks OS connectivity for the Enterprise Virtual Array installation and reference guide for details.

Storage System Scripting Utility for EVA

The HP StorageWorks Command View EVA software includes a Storage System Scripting Utility (SSSU). You can download the HP StorageWorks Command View EVA with SSSU from the following HP web site:
<http://h18006.www1.hp.com/products/storage/software/cmdvieweva/index.html>

Avoiding problem situations

The following sections describe problems that may arise, and their solutions.

Known problems

You can find information about problems specific to the EVA and Command View EVA in their respective release notes.

Codeload usage

When a maximally configured system is running at maximum load, multipathing timing constraints make codeload functionality ineffective. The system may time-out before codeload is complete. Therefore, you should perform multipathing software upgrades at an off-peak time.

Disk Resource Pending Timeout for large configurations

To ensure continuous operation of disk resources across SAN perturbations with disk resource counts greater than eight, HP recommends that the Pending Timeout parameter for each disk resource be increased from 180 seconds to 360 seconds.

To view and set the Pending Timeout parameter:

1. Open the Microsoft® Cluster Administrator.
2. Select a Disk Group resource in the left pane.
3. One at a time, right-click each Disk Resource in the right pane and select **Properties**.
4. Select the **Advanced** tab from the Properties menu.
5. Locate the Pending Timeout value and change it to **360**.
6. Click **OK**.

Host considerations

This section contains information and important reminders about the host servers.

Windows 2000 and Windows Server 2003 notes

There are two situations in which drive-letter remapping might occur that could affect access to data by programs you may need to run.

- Replacing one server with another.
- Replacing an FC HBA in one of your systems.

During such a system or adapter changeover, be sure to manually remap drives to drive letters using Disk Manager. This restores proper access to your data.

When you replace an FC HBA in a server, you need to reinstall the HBA driver. Windows 2000/Windows Server 2003 automatically reloads the original driver for this adapter and resets many important registry settings. New connections are created on the HSV controller. Assign the new WWNs to the appropriate host.

Upgrading from Windows NT 4.0 to Windows 2000 or Windows Server 2003

If you are upgrading from Windows NT 4.0 to Windows 2000 or Windows Server 2003, you must remove the software components installed by the previous version of the Fibre Channel Setup utility:

1. Start the existing version of the Fibre Channel setup utility, and follow the procedures to remove components. Alternatively, you can use the Add/Remove Programs applet.
2. Upgrade from Windows NT 4.0 to Windows 2000 or Windows Server 2003 as instructed by Microsoft documentation.
3. Reboot.
4. Install the HBA driver upgrade as instructed in the *HP SANworks Windows NT/Windows 2000 Kit V2.0 for Enterprise Virtual Array*.
5. Run the Fibre Channel Setup utility.

Registry growth in Windows

The Windows plug-and-play architecture limits the number of plug-and-play devices that are added or removed from the registry. Whenever devices are added or removed, or snapshots created or deleted, entries are added to the registry by the plug-and-play manager, potentially causing the registry to grow beyond the allowed capacity.

If more than 700 entries are in the registry, the next time the system reboots, the following error message occurs: Failed to load Windows 2000 due to a file missing or corrupt in the \WINNT\SYSTEM32\CONFIG\SYSTEM directory.

Refer to the Microsoft Knowledge Base article (Q269075), for more information about the registry growth problem.

Known limitations for large LUNs for Windows 2000

In Windows 2000, if any LUN greater than 7 is removed and a subsequent disk scan is performed, the Found New Hardware wizard may ask you to finish the installation of the device that was removed. The Device Manager may show the device with a yellow warning icon on it. A reboot of the system removes the device.

Windows 2000 dynamic disk snapshots and snapclones

The use of snapshots and snapclones in HP SANs is not supported in a Windows 2000 environment if the snapshot or snapclone is presented to the same Windows 2000 host as the LUN from which the snapshot or snapclone was created. Snapshot and snapclone are features of the HSG80 and HSV controller based HP Storage systems. All dynamic disks on a system have information in their metadata about the other dynamic disks on the system that exist. When Windows is presented with two dynamic disks that have the same information on them, it cannot resolve the conflict.